IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF MISSOURI
EASTERN DIVISION

A.O.A., *et al.*,	)	
	)	
Plaintiffs,	)	
	)	
vs.	)	Case No. 4:11-cv-00044-CDP
	)	(CONSOLIDATED)
THE DOE RUN RESOURCES	)	
CORPORATION, *et al.*,	)	
	)	
Defendants.	)	

**MEMORANDUM OF LAW IN SUPPORT OF PLAINTIFFS' MOTION TO
EXCLUDE, IN PART, THE EXPERT OPINIONS OF DR. SHAHROKH ROUHANI**

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Dr. Shahrokh Rouhani is an environmental scientist, engineer, and consultant in environmental statics and geostatistics. He was retained by Defendants to offer opinions at trial related to the La Oroya Complex. Plaintiffs move to exclude certain rebuttal opinions he offers that critique the work of Plaintiffs' air modeling expert, David Sullivan. Specifically, Plaintiffs object to paragraphs 22 through 28 of Rouhani's March 19, 2021 supplemental report, where he compares the daily and hourly concentrations estimated by Sullivan's model with measured values from the air monitoring sites at those same dates and times.[1]

The Court should exclude those opinions because they are not based on reliable principles and methods and are not helpful to the jury. Rouhani evaluated Sullivan's air model by analyzing whether it accurately predicts airborne concentrations to the hour or to the day at a specific location. While Rouhani refers to these as "concurrent comparisons," they are actually the result of a technique known as "pairing in time and space," which is not an accepted method for evaluating an air quality model. Air models are not intended to be accurate to the hour or even the day; rather, they are assessed by how accurately they predict distributions of concentrations and long-term averages. In other words, by conducting his "concurrent comparisons," Rouhani is grading Sullivan's model against an impossible standard.

Rouhani uses a flawed methodology because he lacks significant experience evaluating air models and developed his opinions solely for the purpose of testifying in this case. His regressions and conclusions will not assist the jury in understanding the evidence or determining a fact in issue, especially since the allegations here concern Plaintiffs' *long-term* exposure to lead and other toxins. Without a reliable scientific foundation, Rouhani's "concurrent comparisons" do not satisfy the standard for admitting expert testimony set forth in Federal Rule of Evidence

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[1] *See* Exh. 1, Rouhani Supp. Rep. (Mar. 19, 2021) ¶¶ 22-28.

702 and *Daubert v. Merrell Dow Pharms., Inc.*, 509 U.S. 579 (1993). They also fail the Rule 403

balancing test, as whatever probative value they might have is substantially outweighed by the

danger of confusing and misleading the jury. This Court should accordingly enter an order

precluding Rouhani from offering those opinions at trial.

I.   Legal Standard

"A witness who is qualified as an expert by knowledge, skill, experience, training, or

education may testify in the form of an opinion or otherwise if: (a) the expert's scientific,

technical, or other specialized knowledge will help the trier of fact to understand the evidence or

to determine a fact in issue; (b) the testimony is based on sufficient facts or data; (c) the

testimony is the product of reliable principles and methods; and (d) the expert has reliably

applied the principles and methods to the facts of the case." Fed. R. Evid. 702.

To testify as an expert, a witness must possess "scientific, technical, or other specialized

knowledge [that] will help the trier of fact to understand the evidence or to determine a fact in

issue[.]" Fed. R. Evid. 702(a). *Daubert* requires the trial court to assess "whether [a] theory or

technique has been subjected to peer review and publication." *Johnson v. Mead Johnson & Co.,*

LLC, 754 F.3d 557, 562 (8th Cir. 2014) (citing *Daubert*, 509 U.S. at 593-94); *see also Sorensen*

By & Through Dunbar v. Shaklee Corp., 31 F.3d 638, 649 (8th Cir. 1994) (observing that while

peer review is not dispositive, "we do not believe peer review to be an empty gesture"). General

acceptance also has a bearing on the inquiry. *Daubert*, 509 U.S. at 594.

When evaluating a particular scientific technique, courts should "consider the known or

potential rate of error." *Daubert*, 509 U.S. at 594; *see also Ho v. Michelin N. Am., Inc.*, 520 F.

App'x 658, 666 (10th Cir. 2013) (in rejecting expert evidence, district court properly considered

the lack of a measured error rate, the fact that the opinion was not supported by peer-reviewed

evidence or extensive testing, and the contrary generally accepted literature). Another factor

courts consider is "whether the experts are proposing to testify about matters growing naturally and directly out of research they have conducted independent of the litigation, or whether they have developed their opinions expressly for purposes of testifying." *In re Bair Hugger Forced Air Warming Devices Prod. Liab. Litig.*, 9 F.4th 768, 777 (8th Cir. 2021) (quoting *Daubert v. Merrell Dow Pharms., Inc.*, 43 F.3d 1311, 1317 (9th Cir. 1995)); *accord Presley v. Lakewood Eng'g & Mfg. Co.*, 553 F.3d 638, 643 (8th Cir. 2009); *see also* Fed. R. Evid. 702 advisory committee's note to 2000 amendment (noting this factor "remain[s] relevant to the determination of the reliability of expert testimony under the Rule as amended").

The burden is on the proponent of the expert testimony to prove that the expert is qualified, that his methodology is scientifically valid, and that "the reasoning or methodology in question is applied properly to the facts in issue." *Khoday v. Symantec Corp.*, 93 F. Supp. 3d 1067, 1076 (D. Minn. 2015), *as amended* (Apr. 15, 2015) (quoting *Marmo v. Tyson Fresh Meats, Inc.*, 457 F.3d 748, 757-58 (8th Cir. 2006). In assessing a proffer of scientific testimony under Rule 702, the trial court should also be mindful of other applicable rules, including Federal Rule of Evidence 403. *Daubert*, 509 U.S. at 595; *Werth v. Hill-Rom, Inc.*, 856 F. Supp. 2d 1051, 1067 (D. Minn. 2012). Even relevant expert testimony may be excluded under Rule 403 "if its probative value is substantially outweighed by a danger of one or more of the following: unfair prejudice, confusing the issues, misleading the jury, undue delay, wasting time, or needlessly presenting cumulative evidence." Fed. R. Evid. 403; *Daubert*, 509 U.S. at 595.

II.   Factual Background

Plaintiffs' expert, David Sullivan, is a meteorologist with 46 years of professional experience in air quality and meteorology.[2] He is an expert in air quality dispersion modeling

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[2] Exh. 3, Sullivan Rep. (Feb. 17, 2019) at 11.

(computer generation of expected airborne concentrations and surface deposition), air quality and meteorological monitoring, exposure assessment, and media transfers of airborne pollutants to surface soils and other surfaces.[3] Sullivan was retained to evaluate "air quality and deposition impacts in and around La Oroya, Peru based on available emissions data from the Defendants' La Oroya smelter and refinery operations."[4]

As part of his work in this case, Sullivan created a CALPUFF[5] air quality model (sometimes called a dispersion or Gaussian puff model) to estimate airborne concentrations and community dust concentrations of lead, arsenic, and sulfur dioxide at the residences and schools attended by Plaintiffs.[6] CALPUFF models are not designed to estimate concentrations at specific hours and times.[7] Rather, Sullivan's model is intended to estimate concentrations over time.[8] As his report makes clear, Sullivan built his model using monthly emissions data for pollutants associated with certain emissions sources at the La Oroya Complex.[9] Sullivan's modeling is important because no Plaintiffs lived or attended school at a monitored site. Sullivan's air model thus presents evidence of air pollutants including lead, arsenic, and sulfur dioxide in the broader La Oroya vicinity to better estimate Plaintiffs' actual exposures during their childhoods.[10]

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[3] *Id.* at 11-12.

[4] *Id.* at 11.

[5] CALPUFF is a modeling application approved by the EPA for use in estimating "single source pollutant concentrations resulting from the long range transport of primary pollutants." 40 C.F.R. Pt. 51 App. Y § III.A.3. CALPUFF "is widely used in the U.S. for air quality analysis for sites located in areas with complex wind flow and for long-range dispersion." Exh. 3 at 9. While the parties dispute the various experts' application of CALPUFF models in this case, all parties use CALPUFF models, and none disputes CALPUFF's validity in a general sense.

[6] *See* Exh. 3 at 65.

[7] *See id.* at 38 ("Models, including the CALPUFF model, were not developed with the intent that results would be accurate when constrained in time and space, such as estimating the concentration at a specific hour and a specific home.").

[8] *Id.* at 68.

[9] *See, e.g., id.* at 40-51 (Tables 2-13, showing monthly figures).

[10] *Id.* at 23; Exh. 6, Sullivan Rebuttal Rep. (May 28, 2021) at 25.

The U.S. Environmental Protection Agency (EPA) establishes different standards for evaluating air quality assessments depending on the toxin at issue.[11] Following EPA guidance, Sullivan evaluated his model's arsenic predictions based on an annual average, lead predictions based on a maximum three-month rolling average, and sulfur dioxide predictions based on the 99th percentile of the daily one-hour maximum (i.e., evaluating how accurately the model predicts the observed maximum daily sulfur dioxide concentrations on days where that maximum is in the 99th percentile of all daily maxima over the period studied).[12] Using those metrics, Sullivan was able to demonstrate his model's successful performance for each toxin at issue.[13] Sullivan also ran his CALPUFF model three times, using estimates from three different emissions inventories, to demonstrate that his modeling approach and conclusions are reliable and generally consistent regardless of which emissions inventory is selected.[14]

Rouhani, by contrast, is not an air modeling expert.[15] He has never performed a peer review of any air modeling article.[16] He has never taught any classes in air modeling.[17] He does not hold himself out to clients as someone who can provide air modeling services.[18] He is not trained to use or understand CALPUFF.[19] He does not hold himself out as having an expertise in

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[11] Exh. 3 at 23 n.2; *see also id.* at 36; 94 n.14.

[12] Exh. 4, Sullivan Rebuttal Rep. (June 22, 2020) at 50. For example, in a 365-day year, the day with sulfur dioxide concentrations in the 99th percentile would be the day with the fourth-highest reading.

[13] Exh. 3 at 67-68.

[14] Exh. 5, Sullivan Rep. (Dec. 1, 2020) at 8-9, 26.

[15] Exh. 2, Rouhani Dep. (Apr. 14, 2021) at 9:11-14 (agreeing that "air modeling is not [his] field of expertise"); *id.* at 12:16-18 (same).

[16] *Id.* at 9:15-18.

[17] *Id.* at 9:19-22.

[18] *Id.* at 9:23-10:5.

[19] *Id.* at 11:8-12.

air modeling.[20] He has no expertise in collecting the data used in air quality models[21] or in evaluating whether air monitors are accurately reporting the air concentrations in their sited locations.[22] He did not even know that his flawed methodology is referred to as "pairing in time and space."[23] The extent of his air modeling experience is some work in graduate school and an air modeling investigation for the EPA over two decades ago.[24]

Rouhani tries to rebut Sullivan's findings by attempting to undermine his model. To do that, he compares model outputs on a daily or hourly basis against the measured daily or hourly toxin concentrations at the various monitoring stations– a method known as "pairing in time and space." His Figure 2, for instance, plots predicted versus measured lead concentrations so that each point on the chart "represents a modeled and measured value *during the same day*."[25] He provides 30 pages of appendices showing similar comparisons.[26] When the values inevitably diverge, Rouhani concludes in Opinion 2 that Sullivan's air model yields unreliable predictions. Rouhani's Opinion 3 uses the same methodology, this time to compare the daily and hourly modeled values from Sullivan's three model runs (using the three emissions inventories mentioned above) against one another. Not surprisingly, that exercise also yields "substantial differences,"[27] leading Rouhani to conclude that the results are not consistent.

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[20] *Id*. at 12:16-18.

[21] *Id*. at 12:25-13:5.

[22] *Id*. at 13:20-14:1.

[23] *Id*. at 69:15-21.

[24] *Id*. at 10:6-25.

[25] Exh. 1, Rouhani Supp. Rep. at ¶ 23 (emphasis added).

[26] *Id*. at Attach. C and D.

[27] *See id*. at ¶¶ 26-28; Attach. C and D.

III.   Argument

Rouhani's use of "concurrent comparisons" to critique Sullivan's air model should be excluded under Rule 702. Because he lacks sufficient specialized knowledge about the field of air modeling, Rouhani adopts an unreliable method for evaluating Sullivan's air model that is not generally accepted in the air modeling community, has not been peer reviewed, has a high rate of error, and was developed solely for the purposes of litigation.

The Court should also exclude Rouhani's opinions under Rule 403. Rouhani criticizes Sullivan's model for failing to do something – accurately predicting concentrations at particular monitoring sites on particular days – that it was not designed to do. Evaluating whether Sullivan's model accurately predicts daily or hourly measured values is unhelpful to the jury. This case involves allegations that Plaintiffs were injured by long-term exposures. Rouhani's opinions, therefore, have scant probative value, while admitting them would create a substantial risk of confusing and misleading the jury.

A.   Rouhani's "concurrent comparisons" should be excluded under Rule 702, because they are not the product of reliable principles and methods.

The opinions expressed in paragraphs 22 through 28 of Rouhani's supplemental report should not be admitted under Rule 702 because they are the product of an unreliable methodology. Rouhani purports to evaluate Sullivan's model by comparing modeled emissions against actual measurements at specific times and locations over a period of years. But "pairing in time and space," as his method is known, is not a reliable way to evaluate an air model.[28] Rouhani's method is not generally accepted within the air modeling community, is not supported by peer reviewed-evidence or publications, and has not been subjected to testing.

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[28] *See* Exh. 6, Sullivan Rebuttal Rep. (May 28, 2021) at 54-57.

It is impossible to create a model that accurately and consistently predicts air concentrations at every specific time and place. *See United States v. Ameren Missouri*, 421 F. Supp. 3d 729, 789 (E.D. Mo. 2019), *aff'd in part*, 9 F.4th 989 (8th Cir. 2021) ("[M]odeling outputs will not perfectly match monitoring data."). Indeed, "because of variations in wind direction, it is almost fruitless to attempt to compare predictions and observations paired in space and time."[29] Even a small difference in wind direction (*i.e.*, 5 to 10 degrees) between measured and modeled values can result in predicted air concentrations being 20%-70% off point-in-time measured concentrations.[30] EPA has explained that "[s]uch uncertainties do not indicate that an estimated concentration does not occur, only that the precise time and locations are in doubt."[31] For this reason, EPA discourages "placing too much weight on modeled versus predicted concentrations paired in time and space" when evaluating model performance.[32]

At his deposition, Rouhani acknowledged that it is normal for wind direction to vary from hour to hour and even from minute to minute at a given location, and that those variations even out when evaluated on a longer-term basis (*i.e.*, monthly or annually).[33] He should have known that no air model would be able to account for the variations in wind speed and direction accurately enough to produce predicted concentrations that matched the actual measurements at a

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[29] Exh. 7, J.C. Chang, et al., *Air Quality Model Performance Evaluation*, 87 Meteor. and Atmos. Physics 167, 185 (2004) (citing J.C. Weil, et al., *Evaluating Air Quality Models: Review and Outlook*, 31 J. Appl. Meteor. 1121-1145 (1992)). Rouhani misinterprets this peer-reviewed literature to mean that, "[f]rom their point of view ... it's a very negative thing that basically says that, you know, expecting a reliable air model appears to be, to these authors, a fruitless goal." Exh. 2 at 143:5-8. This extreme opinion – that no air model is reliable – perhaps explains Rouhani's decision to use an evaluation method that causes every air model to fail.

[30] *See* Revisions to the Guideline on Air Quality Models: Enhancements to the AERMOD Dispersion Modeling System and Incorporation of Approaches to Address Ozone and Fine Particulate Matter, 82 Fed. Reg. 5182, 5209 (Jan. 17, 2017).

[31] *Id*.

[32] *Id*. at 5186.

[33] Exh. 2 at 62:10-63:13.

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specific place and time. Rouhani also should have known that the refining operations at the La

Oroya Complex varied from hour to hour,[34] further increasing the unpredictability of the

measured data on such a granular time scale.

Part of the problem is that Rouhani premised his opinions on two false assumptions. First,

he never looked at the emissions rates Sullivan put into his model[35] and mistakenly assumed they

were daily inputs that could generate reliable daily outputs. That was not true. Sullivan ran his

model using monthly average emissions rates from the various emission sources at the La Oroya

Complex, because those were the data made available by Doe Run Peru.[36] Second, Rouhani

further assumed that Sullivan's model was designed to "predict daily air lead and arsenic

concentrations and hourly SO_2 concentrations at specific locations."[37] But that was also untrue.

While the CALPUFF software generated those figures, Sullivan's model was not intended to

reliably predict daily or hourly concentrations; rather, it was designed to produce reliable results

on a quarterly, annual, and (in the case of sulfur dioxide) distributional basis.[38]

In other words, Rouhani wrongly assumed that Sullivan used more precise emissions data

to predict concentrations at specific times and locations, when in fact Sullivan used monthly

averages to estimate long-term concentrations. Because Rouhani's "concurrent comparisons" are

based on these false assumptions, they are unreliable, unhelpful, and therefore inadmissible. *See*

In re Wholesale Grocery Prod. Antitrust Litig., 946 F.3d 995, 1001-02 (8th Cir. 2019) (affirming

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[34] *See, e.g.*, Exh. 3 at Tables 9-10 (showing various emissions sources operating for different numbers of hours than each other and compared from month-to-month).

[35] Exh. 2 at 67:24-68:3 ("Q. Are you aware that Mr. Sullivan actually used emissions rates that were average over one month intervals for his modeling purposes, not daily or hourly? A. I did not look at his emission rates.").

[36] Exh. 6 at 63.

[37] Exh. 1 at ¶ 22; *see also* Exh. 2 at 67:15-23.

[38] Exh. 6 at 63; Exh. 3 at 85.

exclusion of expert testimony that was based on a flawed assumption); *see also Glastetter v. Novartis Pharms. Corp.*, 107 F. Supp. 2d 1015, 1018 (E.D. Mo. 2000), *aff'd*, 252 F.3d 986 (8th Cir. 2001) ("If the evidence is not applicable to the facts of the case or not sufficiently tied to the facts of the case, then it may not be helpful to the trier of fact."); *Weisen v. N. Tier Retail LLC*, No. 19-CV-2624, 2021 WL 2661507, at *4 (D. Minn. June 29, 2021) ("[A]ny step the expert has taken that renders the analysis unreliable renders the expert's testimony inadmissible[.]").

The other part of the problem is that Rouhani does not have a sufficient understanding of how air modeling works. He could not cite any scientific literature that supports his pairing in time and space methodology.[39] He admitted at his deposition that the air model evaluations he has seen published in reviewed journals "never presented their results as being reliable on an hourly value."[40] Rather, "the final conclusions were always driven by some sort of a long-term average."[41] Nonetheless, he chose to grade Sullivan's model against an impossible, untested standard. Not surprisingly, he has never found an air model that could accurately or reliably predict hourly or daily air quality at a particular location.[42]

Rouhani's inexperience with air modeling weighs against the admission of his opinions. *See Wheeling Pittsburgh Steel Corp. v. Beelman River Terminals, Inc.*, 254 F.3d 706, 715 (8th Cir. 2001) (citing *Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 156 (1999)) ("[I]t is the responsibility of the trial judge to determine whether a particular expert has sufficient specialized knowledge to assist jurors in deciding the specific issues in the case."); *see also Woods v. Wills*,

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[39] *See* Exh. 2 at 88:21-89:24.

[40] *Id.* at 82:24-83:7.

[41] *Id*. at 83:8-22.

[42] *See id.* at 82:17-23 ("Q. Do you recall anytime in your career ever concluding that an air quality model could accurately or reliably predict hourly or daily air quality at a particular location? A. I -- I don't recall any case that -- as I told you this day, I have reviewed only a handful of models.").

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No. 03-CV-105 CAS, 2005 WL 5990326, at *8 (E.D. Mo. Oct. 27, 2005) (excluding testimony where proposed expert "lack[ed] the necessary education, professional training or experience to testify about what is generally accepted in [the relevant scientific field] and which tests and methodologies are accurate and reliable").

Statistics and regressions are powerful tools when used correctly, but unless one understands the purpose for which the regressions are being performed, the results are meaningless. Because Rouhani attempts to test the reliability of Sullivan's modeling results against an impossible and irrelevant standard, any opinions he could offer based on that methodology would be unhelpful to the jury and should accordingly be excluded from the trial under Rule 702. *See Wagner v. Hesston Corp.*, 450 F.3d 756, 760 (8th Cir. 2006) (a district court properly considers "[a] lack of testing[,] ... lack of peer review, lack of general acceptance, and evidence that the theories were developed in the context of litigation" in granting a *Daubert* motion); *cf. Howard v. Bosch Thermotechnology Corp.*, No. 17-CV-763 CDP, 2018 WL 2087259, at *4 (E.D. Mo. May 4, 2018) (expert's lack of familiarity with Bosch water heaters meant his opinion on how one may have failed would "not be helpful to a jury"); *Metro. St. Louis Equal Hous. Opportunity Council v. Gordon A. Gundaker Real Est. Co.*, 130 F. Supp. 2d 1074, 1088 (E.D. Mo. 2001) ("Although Dr. Peterman could be considered qualified as an expert in statistical analysis of geographic data, the Court finds that he lacks sufficient knowledge through training, education, or experience to be considered qualified to offer an expert opinion regarding matched pair data analysis and/or whether the EHOC tests provide evidence of racial steering.").

B.   Rouhani's opinions should be excluded under Rule 403.

The Court should also prohibit Rouhani from presenting his "concurrent comparison" critique of Sullivan's model at trial because it fails the Rule 403 balancing test. *See United States*

v. Solorio–Tafolla, 324 F.3d 964, 966 (8th Cir. 2003) ("Even so, under Daubert and Rule 403 of

the Federal Rules of Evidence, the probative value of the expert testimony must not be

substantially outweighed by the danger of unfair prejudice, confusion of issues, or misleading the

jury."). To someone who does not regularly work in the air modeling industry, Rouhani's

approach might seem sensible. Coming from an expert statistician like Rouhani, it could well be

assigned "talismanic significance" in the eyes of the jury. *United States v. Frazier*, 387 F.3d

1244, 1263 (11th Cir. 2004).

But air models, including the CALPUFF model, are not designed to be accurate when

paired in time and space, such as estimating concentrations at a specific location during a

specific time of day.[43] No air model would pass that test. Indeed, attempting to devise a model

that could accurately predict precise concentrations at unique moments in time would have been

pointless and futile. Given that the Complex's operations could vary greatly from one hour to the

next, *no model* could be expected to predict when those changes would occur and what effect

they would have on air concentrations within such narrow time scales. The reliable method for

assessing an air model is to test how accurately it does what it is designed to do, which is to

predict trends over time.[44]

Whether or not Sullivan's model reliably predicts airborne concentrations at a particular

place during a particular hour or on a particular day is minimally relevant. Nothing helpful to the

jury can be gleaned from testimony that Sullivan's air model produced values that are not

accurate at such a granular level. The purpose of the air modeling Sullivan performed was to

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[43] Exh. 3 at 38.

[44] *See* 82 Fed. Reg. 5182, 5209 ("Gaussian models... generally attempt to estimate concentrations at specific sites that represent an ensemble average of numerous repetitions of the same 'event.' Uncertainties in model estimates are driven by this formulation, and... evaluations of model accuracy should focus on the reducible uncertainty associated with physics and the formulation of the model.").

estimate average concentration levels at various locations around La Oroya over time.[45] This approach comports not only with EPA guidelines for how to construct an air model but also with common sense. The allegations here concern injuries caused by *chronic* exposure to lead and other toxins. Sullivan's model accordingly focuses on average levels over time.

At the same time, Rouhani's unhelpful, statistical "concurrent comparisons" would be confusing and misleading to the jury. Air modeling and statistical analysis are not topics familiar to the average juror, and the testimony about both will be highly technical. There is a substantial risk that the jury will see Rouhani's charts with points plotted outside the dotted lines and wrongly conclude, with Rouhani's expert imprimatur, that Sullivan's model must be unreliable because it failed a meaningless test. The Court should exercise its authority under Rule 403 to ensure that the jury is not confused and misled in this way. *See Chism v. CNH Am. LLC*, 638 F.3d 637, 642 (8th Cir. 2011) (affirming exclusion of expert evidence on the grounds that "it was minimally probative, cumulative, and would have unnecessarily confused the issue").

IV.   Conclusion

Rouhani attempts to critique Sullivan's air model without a sufficient understanding of Sullivan's methods or the general standards associated with air modeling. As a result, he employs an unscientific, litigation-oriented methodology for evaluating Sullivan's model that is not generally accepted by the air modeling community and that is functionally meaningless. Rouhani's "concurrent comparisons" are therefore unreliable and unhelpful. At the same time, they could easily mislead and confuse the jury. The Court should accordingly exclude the opinions set forth in paragraphs 22 to 28 of Rouhani's March 19, 2021 supplemental report.

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[45] Exh. 3 at 68.

Specifically, the Court should preclude Rouhani from offering any testimony or opinions

concerning his "concurrent comparisons" methodology.

Respectfully submitted,

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